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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,593	02/15/2005	Kazuhiko Ikeuchi	2005_0128A	8828

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EXAMINER

SWERDLOW, DANIEL

ART UNIT	PAPER NUMBER
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2615

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/524,593	Applicant(s) IKEUCHI, KAZUHIKO	
	Examiner Daniel Swerdlow	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on 14 December 2006. These drawings are acceptable.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 14 through 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Vincenot (WO 03/010994 A1).**
4. WO 03/010994 A1 is prior art under 35 USC 102(b) with respect to this application due to its publication date of 6 February 2003. For convenience, US 2004/0170292 A1 is used herein as a translation and citations are made with respect to the US publication.
5. Regarding Claim 14, Vincenot discloses a loudspeaker assembly (Figs. 1, 2) comprising: a loudspeaker 11 with a diaphragm 19 and a rigid chassis 15 that corresponds to the frame arrangement claimed and is attached (i.e., fixed) to the outside edge (i.e., outer periphery) of the diaphragm 19 so that the diaphragm 19 spans an opening in the rigid chassis 15 that corresponds to the frame arrangement claimed (para. 0018); and a blocking member 25 that corresponds to the speaker grille claimed and is mechanically fixed to (i.e., supported by the rigid chassis 15 that corresponds to the frame arrangement claimed (para. 0007) and has two wide conjugate openings that correspond to the sound opening claimed (para. 0020); wherein the diaphragm has

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an outside edge (i.e., edge portion) (para. 0018) and a main axis (x'x) (i.e., a center) (para.0020) and is attached (i.e., fixed) to the rigid chassis 15 that corresponds to the frame arrangement claimed in such a manner as to define an acoustic emission plane that corresponds to the diaphragm vibration plane claimed and contains the contour of the attachment of the diaphragm to the frame (i.e., is one of circular and oval) (para. 0019); wherein the blocking member 25 that corresponds to the speaker grille claimed includes a blocking portion including a central blocking portion in opposition to the diaphragm center (Fig. 1); wherein the conjugate openings that correspond to the sound opening claimed are opposite to the a portion of the diaphragm including the outside edge and the area of attachment to the frame (Fig. 2); and wherein the blocking member covers one third to one half of the front surface of the frame (i.e., the sound opening is one half to two thirds or at least 50% and less than 67% of an area of the diaphragm).

6. Regarding Claim 15, Vincenot further discloses the conjugate openings that correspond to the sound opening claimed are opposite to the portion of the diaphragm including the outside edge (Fig. 2).

7. Regarding Claim 16, Vincenot further discloses the outer boundary of the wide conjugate openings that correspond to the sound opening claimed being formed by the chassis and, as such, being arc-shaped and parallel to the attachment of the diaphragm to the frame (i.e., the fixing portion) (Fig. 2).

8. Regarding Claim 17, Vincenot further discloses two sound openings (Fig. 2) and a domed surface 33 (Fig. 4) that correspond to the reinforcement ribs claimed and separates the wide conjugate openings that correspond to the sound opening claimed (para. 0022).

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9. Regarding Claim 18, Vincenot further discloses the domed surface 33 (Fig. 4) that correspond to the reinforcement ribs claimed extends outward from the center of the blocking member 25 and separates the wide conjugate openings that correspond to the sound opening claimed.

10. Regarding Claim 19, Vincenot further discloses the domed surface 33 (Fig. 4) that correspond to the reinforcement ribs claimed extends radially outward from the center of the blocking member 25 and separates the wide conjugate openings that correspond to the sound opening claimed.

11. Regarding Claim 20, Vincenot further discloses the wide conjugate openings that correspond to the sound opening claimed being elongate and extending circumferentially inside an outer circumference of the diaphragm (Fig. 2).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. **Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincenot in view of Takewa et al. (US Patent 5,862,242).**

14. Regarding Claim 21, as shown above apropos of Claim 14, Vincenot anticipates all elements except the diaphragm vibration plane being oblong and rounded. Takewa discloses a loudspeaker with an oblong and rounded diaphragm vibration plane (Fig. 4). Takewa further

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discloses that such an arrangement facilitates mounting in television applications (column 1, lines 10-15). It would have been obvious to one skilled in the art at the time of the invention to apply the oblong and rounded diaphragm vibration plane taught by Takewa to the loudspeaker assembly taught by Vincenot for the purpose of realizing the aforesaid advantage.

15. Regarding Claim 22, as shown above apropos of Claim 14, Vincenot discloses a range of sound openings from 50% to 67% of an area of the diaphragm.

16. **Claims 23 through 26, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincenot in view of Takewa and further in view of Karr (US Patent 3,716,671).**

17. Regarding Claim 23, as shown above apropos of Claim 21, the combination of Vincenot and Takewa makes obvious all elements except ribs separating sound openings and extending in the direction of the minor axis of the vibration plane. Karr discloses a speaker housing (Fig. 1) including a grille 38 with a solid central portion and sound openings separated by ribs extending in the direction of a minor axis (column 2, lines 53-62). One skilled in the art would have known that such an arrangement provides structural strength to the grille and protection for the loudspeaker diaphragm. It would have been obvious to one skilled in the art at the time of the invention to apply the ribbed grille taught by Karr to the combination made obvious by Vincenot and Takewa for the purpose of realizing the aforesaid advantages.

18. Regarding Claim 24, Karr further discloses the ribs extend outward from a solid center portion (Fig. 1).

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19. Regarding Claims 25 and 26, Karr further discloses the solid center portion elongated along a major axis (Fig. 1).

20. Regarding Claim 28, as shown above apropos of Claim 21, the combination of Vincenot and Takewa makes obvious all elements except the center blocking portion constituting a first rib along a major axis separating sound openings in the direction of the minor axis. Karr discloses a speaker housing (Fig. 1) including a grille 38 with a solid central portion that corresponds to the first rib claimed, is along a major axis and separates sound openings along a minor axis (column 2, lines 53-62). One skilled in the art would have known that such an arrangement provides structural strength to the grille and protection for the loudspeaker diaphragm. It would have been obvious to one skilled in the art at the time of the invention to apply the grille arrangement taught by Karr to the combination made obvious by Vincenot and Takewa for the purpose of realizing the aforesaid advantages.

21. Regarding Claim 29, Karr further discloses plural sound openings on either side of the solid central portion, the openings separated by members that correspond to the second ribs claimed.

22. Claims 27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincenot in view of Takewa and further in view of Karr and further in view of Ringel (US Patent 1,951,531).

23. Regarding Claims 27 and 30, as shown above apropos of Claims 23 and 28, respectively, the combination of Vincenot, Takewa and Karr makes obvious all elements except a magnet on the surface of the blocking portion opposite the diaphragm. Ringel discloses a loudspeaker

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(Figs. 1,2) including a pole piece 9 that corresponds to the magnet claimed and is on the surface of a baseplate 11 arranged across a central portion of the loudspeaker frame (page 1, line 103- page 2, line 15). Ringel further discloses that such an arrangement provides space efficiency and protection of components (page 1, lines 19-24). It would have been obvious to one skilled in the art at the time of the invention to apply the magnet arrangement taught by Ringel to the combination made obvious by Vincenot, Takewa and Karr for the purpose of realizing the aforesaid advantages.

Response to Arguments

24. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Examination of this application has been transferred to the undersigned. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 571-272-7531. The examiner can normally be reached on Monday through Friday between 7:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh H. Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Daniel Swerdlow
Primary Examiner
Art Unit 2615

ds
9 March 2007